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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/660,566	09/12/2000	William G. Deitz	SJ09-2000-0087US1	6955

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EXAMINER

LEE, CHI HO A

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/660,566	DEITZ ET AL.	
	Examiner	Art Unit	
	Andrew Lee	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 6 is objected to because of the following informalities:

Claim 6 should depend on Claim 3 and not Claim 1 because Claim 1 does not require a first and second resiliency circuit. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 6, 9-11, 15, 18, 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Hahn et al U.S. Patent Number 5,991,891.

Re Claims 1, 9, 18, 19, fig. 5 teaches loop system 100 (adaptive hub) including loops (first and second loops) coupled to nodes 102 and 104 (a first and second host server interface terminals respectively) and MUX switch 124 (a loop healing switch) coupled to the loops to heal loop failure (See col. 5, lines 13-43).

Re Claims 2, 11, refer to Claim 1, nodes 102 and 104 includes loop coherency circuits (a first and second storage controller terminals).

Re Claims 3, 6, 12, 15, refer to Claim 2, wherein a loop coherency circuits of node 130 includes a pair of loop redundancy chips 126 (a first and second loop

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resiliency circuits; a third and fourth loop resiliency circuit) coupled between loops and nodes 102 and 104 (See col. 2, lines 59-64).

Re Claim 10, refer to Claim 9, storage controllers are RAID (See col. 5, lines 45-50).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 5, 13, 14, 20, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al U.S. Patent Number 5,991,891 in view of Henson et al U.S. Patent Number 6,289,002.

Re Claims 4, 5, 13, 14, 20, 21, refer to Claim 3, wherein within the 126 includes MUX (a port bypass circuit) for switching from primary loop to secondary loop when a loop failure is detected (See col. 4, lines 12-20), wherein the loop coherency circuit (a signal detection unit; a first logic) look for signal levels determine incoherency or failure to enable connect and disconnect of loops (See col. 3, lines 55 ~ col. 4, lines 1-10). Hahn fails to explicitly teach checking for "a loop port enable signal from a controller...indicates there is a fault in the controller". However, Henson teaches in fig. 3, a Hub port receive-circuit 314 that receives a loop initiation failure data (a loop port enable signal) from a Node 310 (a controller) to enable a bypass control for the loops coupled to the MUX 306 (See col. 6, lines 33-60). As Hahn et al monitors for physical

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loop failure, one skilled in art would have been motivated by Henson to also monitor for nodal failure for reliability. Therefore, it would have been obvious to one ordinary skilled to combine the teaching of Henson into the teaching of Hahn.

6. Claims 7, 16, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al U.S. Patent Number 5,991,891.

Re Claims 7, 16, 23, Hahn fails to explicitly teach "a copper fibre channel hub". Examiner take official notice that the FCAL standard support copper media and loops. Hence, one skilled in the art would have motivated to use a copper media as supported the FCAL specification.

7. Claims 8, 17, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al U.S. Patent Number 5,991,891.

Re Claims 8, 17, 22, in fig. 5, the node 130 coupled to the loops inherently operates a prescribed bandwidth. When a single loop is coupled to the 130, the loop rate is match with the host bandwidth. One skilled in the art would have been motivated to set the node bandwidth twice the bandwidth of the host when two loops are coupled together for rate matching, as long as the loop rates are the same.

Response to Arguments

8. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 571-272-3130. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AI
3/5/05

ANDY LEE
PATENT EXAMINER

